UNIVERSITY OF MICHIGAN
MAY 25 1953
PERIODICAL READING ROOM

The JOURNAL of GEOGRAPHY

VOLUME LII | MAY, 1953 | NUMBER 5

In This Issue

Notes on the Villages of the Western and Central Provinces of Liberia, West Africa . . . . . *Gordon G. Lill*
Time Clocks . . . . . *M. Melvina Svec*
Using Music to Enrich Geography . . . . . *Marguerite Keinard*
The Need for Orientation Units in High School Geography . . . . . *Paul Porochniak*
World Political Geography in the Curriculum of the Air Force Reserve Officers Training Corps *Majors David C. Winslow and Duane C. Tway*
Comments on Human Geography and Physical Geography . . . . *John Wesley Coulter*
Third Pan American Consultation on Geography . . . . . *Henry J. Warman*
Who Says That Geography Isn't Practical? . . . . . *Oliver H. Laine*
National Council at Work . *Ina C. Robertson*
Geographical Publications . . . . . .
Books and Pamphlets Received . . . . . .

Published by A. J. NYSTROM & CO., for THE NATIONAL COUNCIL OF GEOGRAPHY TEACHERS
THOMAS FRANK BARTON, *Editor*

Outstanding McGRAW-HILL *Books*

ESSENTIALS OF GEOGRAPHY

By Otis W. Freeman, Eastern Washington College of Education, and H. F. Raup, Kent State University. *McGraw-Hill Series in Geography.* 487 pages, $5.50

Intended both as an introduction to geography for students who expect to continue work in the field, and as a survey of the subject for those who will limit their instruction to one course. The book describes the principal physical aspects of the earth as a planet, and the varied environments which it provides for the habitat of man. Various human economies and their relationships to the principal natural environments comprise a large share of the book. In addition, the cultural aspects of some phases of human existence have been included, such as political geographical settlements, urban life, etc.

LABORATORY EXERCISES to accompany *Essentials of Geography*

By H. F. Raup. 134 pages, $2.50

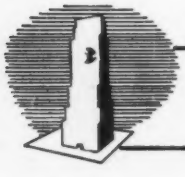
This manual offers a complete and exceptionally helpful supplementary aid to the teacher, for it includes all types of questions—true-false, completion, multiple choice, essay, diagram, maps, recall, etc. Additional material is provided for preparation of climatic graphs and study of different types of land relief as shown by contour maps.

EUROPE AND THE MEDITERRANEAN

By Norman J. G. Pounds, Indiana University. 437 pages, $6.00

A text designed to bring to the student the richness and variety of the European continent, the great age of its culture and the roots of its present civilization, deeply buried in the past. It presents Europe and the bordering lands—landscapes, resources, and industries, and man's adaptation to the environment. It further covers areas closely linked politically, culturally, and economically with European countries.

Send for copies on approval



McGRAW-HILL BOOK COMPANY, INC.

330 WEST 42nd STREET, NEW YORK 36, N. Y.

Mention the JOURNAL—It Assures Service

The JOURNAL *of* GEOGRAPHY

CONTENTS FOR MAY, 1953

Notes on the Villages of the Western and Central Provinces of Liberia, West Africa. By Gordon G. Lill 177

Mr. Lill is head of the Geophysics Branch, Office of Naval Research, Washington, D.C. After serving as an officer in the United States Navy between 1941 and 1945, he participated in the Bikini Scientific Resurvey of 1947. He has served as a consultant to the Department of Defense Research and Development Board and Committee on Geophysics and Geography. This article is based on participation in a mineral survey of Liberia, West Africa, sponsored by the Liberia Mining Company, Incorporated.

Time Clocks. By M. Melvina Svec 188

Miss Svec is well known to the readers of the JOURNAL OF GEOGRAPHY for her many activities in the National Council of Geography Teachers which include being secretary and chairman of the Publications Committee.

Using Music to Enrich Geography. By Marguerite Keinard 189

Mrs. Keinard for the past four years has been teaching geography in grades 5, 6, 7 and 8 at the East Whiteland School, Malvern, Pennsylvania.

The Need for Orientation Units in High School Geography. By Paul Porochniak 191

Mr. Porochniak has long been interested in the problems which arise because his students have such poor backgrounds in geography when they reach his class. He recently completed a thesis entitled "World Geography Orientation" at Clark University.

World Political Geography in the Curriculum of the Air Force Reserve Officers Training Corps. By Majors David C. Winslow and Duane C. Tway 196

Majors David C. Winslow and Duane C. Tway are Chairman and former Chairman, respectively, of the World Political Geography and Related Subjects Panel, Curriculum Planning Group, USAF ROTC, Hq. Air University, Maxwell Air Force Base, Alabama.

Comments on Human Geography and Physical Geography. By John Wesley Coulter 202

Dr. John Wesley Coulter's remarks in this short article were stimulated by an article entitled "The Position of Physical Geography Among the Sciences at Northwestern University" which appeared in the November, 1952 issue of the JOURNAL OF GEOGRAPHY.

Third Pan American Consultation on Geography. By Henry J. Warman 205

Dr. Warman served as an advisor on the United States delegation to the Third Pan American Consultation on Geography.

Who Says That Geography Isn't Practical? By Oliver H. Laine ... 210

Mr. Laine is teaching his third year at the State Teachers College, Towson, Maryland. He has been employed by the Baltimore Planning Commission to work for the city on a Master Plan for Baltimore County.

National Council at Work. By Ina C. Robertson 215

Geographical Publications 216

Books and Pamphlets Received 220

Contents of the JOURNAL are indexed regularly in the *Educational Index to Periodicals.*

Authors alone are responsible for opinions and statements in the JOURNAL.

PRINTED IN THE U.S.A.

The JOURNAL *of* GEOGRAPHY

THOMAS FRANK BARTON, *Editor*
GEORGE J. MILLER, *Assistant Editor*
Indiana University, Bloomington, Indiana

Associate Editors

G. T. RENNER, Teachers College, Columbia University
CORA P. SLETTEN, State Teachers College, Mankato, Minnesota
EARL B. SHAW, State Teachers College, Worcester, Mass.
EDITH P. PARKER, University of Chicago
NEVILLE V. SCARFE, University of Manitoba, Winnepeg
ZOE A. THRALLS, University of Pittsburgh, Pittsburgh, Pennsylvania
HENRY J. WARMAN, Clark University, Worcester, Mass.
CLYDE F. KOHN, Northwestern University
OTIS W. FREEMAN, Eastern Washington College of Education, Cheney
MAMIE L. ANDERZOHN, William Beye School, Oak Park, Illinois

National Council of Geography Teachers
HENRY J. WARMAN, *President*, Clark University, Worcester, Massachusetts
INA C. ROBERTSON, *Secretary*, State Teachers College, Valley City, North Dakota

SUBSCRIPTION TERMS

The subscription price is **$4.00 a year, payable in advance.** The price of single copies is 50 cents. Postage prepaid on subscriptions from the United States, Canada, Canal Zone, Republic of Panama, Puerto Rico, Cuba, Virgin Islands of the United States, Dominican Republic, Philippines, Guam, Samoan Islands, Hawaii, Mexico, Costa Rica, Guatemala, Nicaragua, Republic of Honduras, Salvador, Argentina, Bolivia, Brazil, Colombia, Ecuador, Paraguay, Peru, Uruguay, Spain and Spanish Colonies. All other countries in the Postal Union add for postage 27¢ on annual subscriptions (total $4.27), on single copies 3¢ (total 53¢). All subscriptions are payable in United States Dollars.

The JOURNAL is the official organ of the National Council of Geography Teachers and is sent to all members. The annual dues, $4.00, are payable to the JOURNAL OF GEOGRAPHY. Extra postage rates for copies sent to foreign countries should be added to the membership dues. Make all remittances payable to the JOURNAL OF GEOGRAPHY, in postal or express money orders or bank drafts.

Send manuscript and books for notice or review to the Editor.
Send orders for back numbers to JOURNAL OF GEOGRAPHY.

Published monthly except June, July and August

PUBLICATION OFFICES: 450-454 AHNAIP STREET, MENASHA, WISCONSIN

Business Correspondence, Membership Dues, and Subscriptions may be sent to Publication office or to

A. J. NYSTROM AND COMPANY
PUBLISHERS, JOURNAL OF GEOGRAPHY
3333 ELSTON AVENUE, CHICAGO 18

Entered as second-class matter January 15, 1919 at the post office of Menasha, Wisconsin under the Act of March 3, 1879.

JOURNAL OF GEOGRAPHY PRIZES TO AUTHORS

Annually two prizes, of $25.00 each, are awarded for outstanding articles published in the JOURNAL in the previous five years. The prizes collectively cover most aspects of geography and geographic education. They honor the author and a person who contributed notably to the success of the JOURNAL. The prize awards are named in honor of the following: Richard E. Dodge, Ray H. Whitbeck, George J. Miller, J. Paul Goode, Almon E. Parkins, Ellsworth Huntington, Isaiah Bowman, and Cora P. Sletten.

Annually a Geographic Education Prize of $25.00 is awarded for outstanding articles published in the JOURNAL. In the even numbered years the prize is for the Elementary level and in the odd years for the High School level.

The JOURNAL *of* GEOGRAPHY

Copyright 1953, by the National Council of Geography Teachers

VOLUME LII MAY, 1953 NUMBER 5

NOTES ON THE VILLAGES OF THE WESTERN AND CENTRAL PROVINCES OF LIBERIA, WEST AFRICA

GORDON G. LILL
Office of Naval Research

Liberia is a small independent republic lying on the great bulge of West Africa. The coastline of about 320 miles stretches from seven degrees, 30 minutes to 11 degrees, 30 minutes west longitude. In latitude the country lies between four and nine degrees north of the equator. Much of the area is low-lying with a gradual rise towards French Guinea to the north. Altho the hinterlands of Liberia have been visited frequently, the country is relatively unexplored and very poorly mapped.

The climate of Liberia is that of the tropical rain-forest. The annual precipitation may be as high as 170 inches along the coast. At Ganta, in the interior, the annual maximum precipitation may be only as high as 84.55 inches. By far the larger part of the annual rainfall comes during the so-called rainy season between the months of April and September. The humidity is high, but precise data are not available.

The greater part of the Central and Western Provinces is covered by dense rain-forest interrupted locally by bare ridges of granite-gneiss protruding above the general level of the trees.

As shown on the map (Fig. 1) obtained from the United States Economic Mission, there is but one road into the interior of the country. The road leads from Monrovia to Sanokwelle via Kakata and Ganta. Transportation is possible over this road thruout the year. The road's surface of naturally occurring limonite nodules is suitable both for truck and passenger automobile traffic. It is estimated that a maximum load of from 10 to 20 tons could be transported over the numerous bridges without risk of loss. It will be noted that connecting roads lead northwest across a part of French Guinea to Macenta and beyond, and as far to the southeast as

Tappita in the Eastern Province. In addition to this road system, there is a road leading for a distance of about 45 miles from Monrovia to Bomi Hill. This road is also suitable for both light and heavy traffic. A railroad has been recently constructed by the Liberia Mining Company and is used only to transport iron ore

FIG. 1.

to the port, or in some instances, for the personal convenience of the employees and officials of the company. The Firestone Plantation to the east and south of Monrovia has its private transportation system of well kept roads. With these exceptions, all other transportation in Liberia is by walking. There are no beasts of burden in the country. The economy of the "bush" cannot afford the luxury of pack or draft animals.

THE VILLAGES

The entire population of Liberia is in the villages of the "bush" and in the capital city of Monrovia. It is impossible to present a clear description of population densities. In general, the villages are unevenly scattered thruout the country, but there is some tendency for concentration along the road systems and the area around Zorzor, in the Voinjama district, which is a node of relative concentration of villages. The region north and west of the Khakagissih Mountains, known as the Kongba Forest, is very sparsely settled. The United States Economic Mission to Liberia at Monrovia is conducting studies of the population distribution, but no data are available at present.

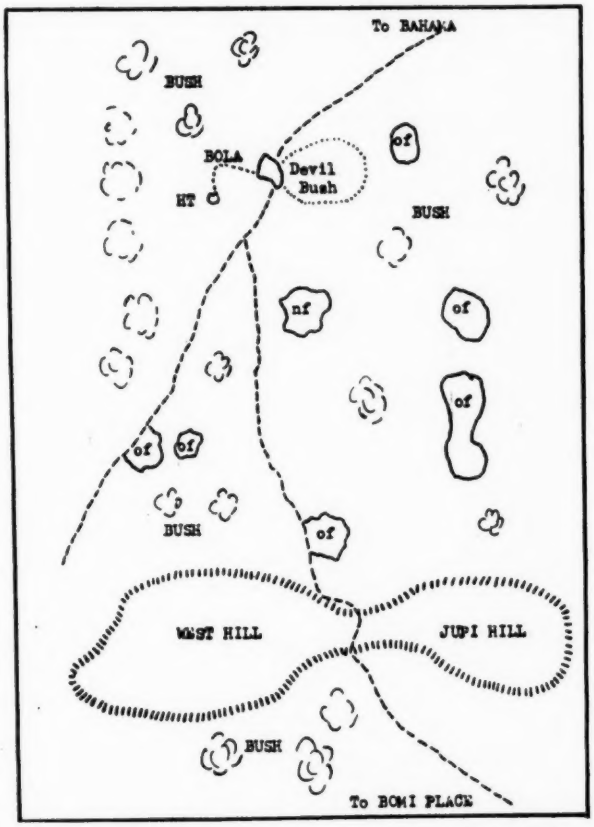


FIG. 2. Outline sketch of area around Bola. Taken from an aerial photograph. Shows Old Farm (of), New Farm (nf) and a Half Town (HT). Second or third growth "bush" lies between farms and trails.

The villages visited by the author altho numerous, varied little in appearance. Without exception, the human habitations were made of mud, sticks and palm thatching, and were arranged without apparent plan within the village. The houses are presumably erected whenever and wherever desired. It is usual to find the "palaver house," the main site of civic and social affairs, located somewhat near the center of the village or village section but such is not always the case. Kitchens, goat sheds and bath enclosures are scattered thruout the village. The kitchens are invariably open thatched sheds.

The goat houses, small structures made of sticks, are raised above the ground on poles to a height of two or three feet and have the appearance of chickencoops.

On aerial photographs the villages appear as circular, open areas from the periphery of which trails lead out into the forest. Fig. 2 is a sketch of the village of Bola and the surrounding area. In some instances there are large Saba trees at the edge of the village clearing. It is understood that the trees were planted by chiefs to commemorate the conclusions of inter-tribal wars. Areas of "Devil Bush" near the large villages of the Clan Chiefs as shown in Fig. 2 are a common feature.

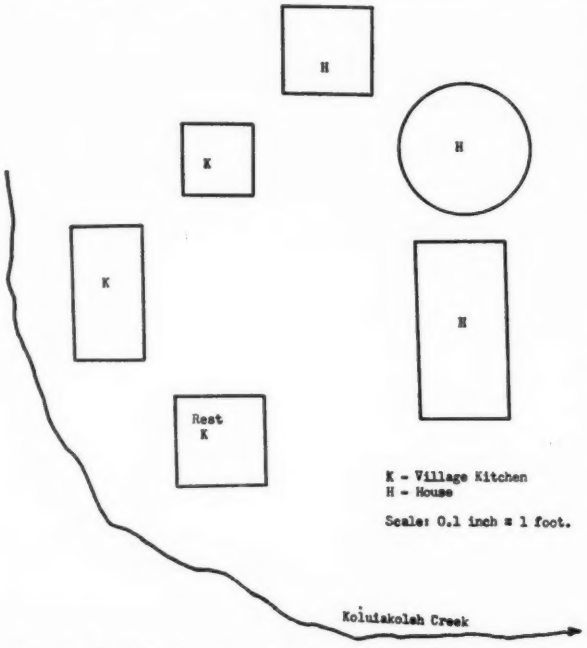


FIG. 3. Partial layout of Koluiakoleh (By the Iron Creek), a large village.

LOCATION AND PERMANENCE OF VILLAGES

Large Villages. Most of the larger villages are located along the major streams, at important trail junctions, on small hills or at road intersections. A native village is considered large if it has a population of 100 or more, and will usually consist of from 40 to several hundred houses. Villages of this size are permanent and may be the home towns of Clan or Paramount Chiefs. A partial layout of a large village is shown in Fig. 3. Fig. 4, a photograph of the main street of Salaye, reveals something of the village layout along a road. Zorzor, the largest native village visited, is shown in Fig. 5.

In addition to their dependence upon the surrounding area for farm products, the larger villages may be the site of considerable pottery production, footwear manufacturing and a lively trade in imported tobacco, cloth, pots and pans and tools such as axes or cutlasses (machetes). Most of the fashioning of coin-silver brace-

lets and other bangles is located in the large villages since there is not enough metal available in the smaller towns.

Farm Villages. A settlement of under 100 in population or of

FIG. 4. Main street of Salaye. The road extends beyond town a few miles to St. Paul River.

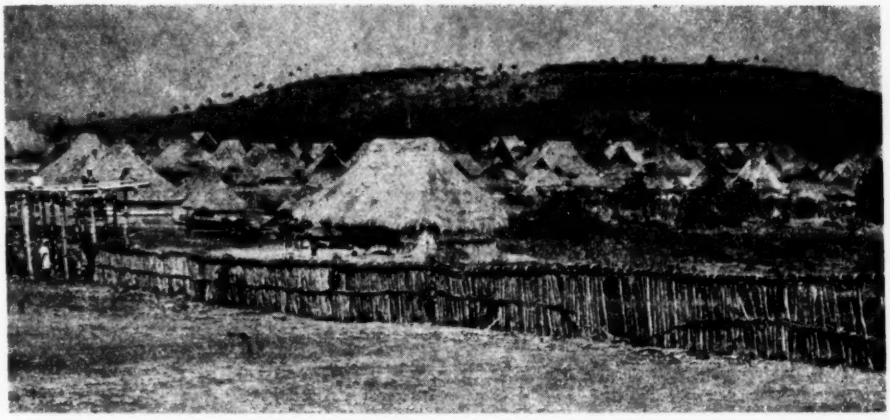


FIG. 5. Zorzor. Taken from the District Commissioner's Compound. Large hill in background is covered with palm-nut trees. Fence in foreground surrounds District Commissioner's Compound.

fewer than 40 huts may be classed as a farm village. Gondaja (Fig. 6) is an example. The livelihood of these villagers is dependent upon the "hillside," or dry-rice grown on the surrounding farms. Peanuts, cassava, bananas, cotton and sugar cane are crops

of secondary importance as is the palm nut except in the districts of Voinjama, Bellefenai and Sanokwelle where it is extensively cultivated. In these three districts it is comparatively easy to transport the palm nuts to the roads where they can be picked up and trucked to Monrovia. The majority of the palm nut trade is handled by the French-Liberia Trading Company with headquarters at N'Zerekore, French Guinea.

There is no general region of farm villages in Liberia. They

FIG. 6. Gondaja. A farm village. Built on a small, flat-topped hill. Note houses in process of construction. Banana trees are in the foreground.

are located all over the country both in lowlands and highlands. The Kongba Forest in the northwest and a part of the Tchien District in the Eastern Province are heavily forested and thus, of course, support very few farms.

Farm villages may be relocated for varying reasons. If the area has become "farmed out" the village may be moved. In some cases superstitution has been the cause of relocation. The author was informed on one occasion that a small village was moved because a leopard entered town one night and killed a man. There are instances of village relocation because of encroachments and

persecutions by the government or government officials.

The names of farm villages may be changed from time to time. The advent of a new chief is one cause for changing a town's name. Some small towns are known by several names among the various tribes.

The farmers all live in the villages. In no case does the farmer live in isolation on the land which has been apportioned to him by the chief. This is an outgrowth of the requirement for protection when tribal wars flourished thruout the country, and partly because the country native feels more at ease when among his

FIG. 7. Mining camp. Construction of long, low type house common in many of the camps visited.

fellows at sundown. The farmer commonly walks as far as two miles to reach his land each morning and he always returns to the village at night.

When a poor return from the rice crop is obtained, farming in Liberia is at a subsistence level. When a good crop is harvested some rice may be sold from village to village or from village to Monrovia. There is seldom enough excess rice to result in a hold-over for more than one year.

Half Towns: Half Towns are small farm settlements consisting of from two to ten houses and sheds. They are quite impermanent and may be relocated as often as once every two or three years. They are generally found along trails at irregular intervals, or.

as sketched in Fig. 2, they may be located near larger villages but off the main trail. The only criteria for location is the suitability of the immediate surroundngs for farming. Half Towns are established as matters of convenience in order to save the long daily walks between the farms and the larger towns. Half Towns are usually named for the founder.

Mining Camps. The unique village in Liberia is the mining camp. The populace of the camp subsists on the proceeds from the gold placers. Several mining camps were visited. With but one exception, the construction of the houses was of the long, low bunk-house type as shown in Fig. 7, instead of the usual round or square house type that is common in the other villages.

The mining camps in Liberia, altho not booming at present, are very much like mining camps in other parts of the world. Boisterousness is common, coupled with drinking and gambling.

Little farming is done in the area around mining camps, since most of the food is purchased from the surplus of the farmers with the money obtained from gold dust. The prospectors, or miners, sometimes make an attempt to cultivate cassava and bananas, but even these are mostly allowed to grow wild.

The only mineral of economic value mined by the native is placer gold. There was considerable mining activity during the 1930's but the deposits have since become nearly exhausted. Iron was once mined locally by the village craftsman. However, because of the development of commerce between Liberia and other countries, enough steel tools have been brought into the "bush" so that mining for iron is no longer necessary. Today, the occasionally found pieces of slag from the old native smelters are looked upon as curiosities of unknown origin by the villagers.

VILLAGE LIFE

The Women. As in many primitive areas, the village women occupy a position subordinate to the men. However, they are respected and for the most part treated with kindness. The fact that women seem to be of less value to their masters than a cow or goat is misleading even tho they are sometimes traded for these animals in marriage pacts. A domestic animal is a highly valuable piece of property in the back country. The women unfortunately are more abundant, readily available, and therefore sometimes seem to be less prized.

The women of the village participate in preparing the farms each year altho the heavy brush work is performed by the men. In constructing a house, the women are assigned the job of plastering. If a fancy house is built a mixture of mud and dung is used, otherwise mud alone serves the purpose.

Hunting. With the exception of monkeys, wild game in the Central and Western Provinces is no longer plentiful. There is sufficient game however to enable many of the villages to maintain one or two hunters. The single-barrelled shotgun is the principal weapon now used in hunting. A license for the gun must be obtained from the Secretary of War. The licensing system was initiated because of difficulties with gun smugglers along the French Guinea-Liberian border. At the time, it was feared by Liberia that French Guinea was planning to encroach upon its territory.

The hunters of the hinterland are not particularly skilled marksmen, but they have learned to conserve their ammunition because of its high cost. The shells used, when purchased in the "bush," cost as much as 20 to 30 cents apiece. Conservation of ammunition is practiced thru the medium of patience. The hunter may wait until his target is close enough to make a "miss" impossible. Even the dreaded "bush cow" (water buffalo) has been taken thru employment of this technique.

A very small portion of the village food supply is furnished by the hunter. A village may go for weeks without fresh meat. Even so, that game which is taken is of the greatest importance for the native has no other source of protein. The game that is killed is used for little else than food.

Certain species of forest antelope, commonly called deer, are still available. Monkeys are plentiful except in the most thickly settled areas. Chimpanzees are common in the northwest corner of the country as are elephants. Two types of wild pig, the black and red, may be found in certain forested areas of the Central and Western Provinces. Spoors of the pygmy hippopotamus were seen as well as evidence of the presence of water buffalo or "bush cow." Wild guinea fowl and a species of game bird known as the "blue-wing" were plentiful in most of the back country visited by us. These two game birds were much better food than the Liberian domestic chicken.

Sometimes the hunter makes use of the snare and box-trap as

a means of catching the small forest antelope. It was impossible to determine how effective these methods were. The use of the bow and arrow is almost an extinct method of hunting.

The division of game was not observed. In principle however, it can be mentioned that the Town Chief is always given his choice of the parts of the game which he may desire. In some cases the medicine men or Zo's and the women Zo's may also be offered their choice of the meat. If a large animal has been killed, or if a quantity of smaller game has been taken, the entire village may be invited to the feast after the chief and medicine men have had their part.

Clothing. The villager dresses to suit the climate. In some villages European clothing, or the remnants thereof, are worn. Small boys in the "bush" wear no clothing. Young girls wear a tiny breach clout which may be either decorated with beads or just an ordinary piece of cloth. In some tribes, young unmarried women wear only a skirt consisting of several yards of either homespun or imported print material. The cloth is wrapped around their waists and secured deftly by a roll at the middle. The older women apparently wear most any type of dress which strikes their fancy and may go completely clad, or dressed only in breach clout and earrings. It was noticed that most of the married women wore imported material, but that too was merely wrapped around the body and secured either at the middle, or under the left arm with a roll and a knot. The men wear either shorts, with a widely variable type of shirt, or robes of simple design which hang loosely from the shoulders to about ankle length. Men's clothing may be made of country or homespun cloth, or the imported khakis or denims which are common everywhere. Frequently the men adapt some piece of European clothing such as a hat, trousers or shoes which may be worn in any combination with the native robe.

The large majority of the village people have no shoes and spend their life barefooted. In a few villages simple sandles are worn. In most instances these are made from old tire casings, probably obtained from Monrovia. In even rarer instances, European shoes were noticed.

The fabric known as "country cloth" which has been mentioned above is woven in many villages. The woven strips are always about four inches wide but may vary in length up to about 50

feet. A woof width of this size seems to be as large as the native weavers can handle for nowhere was it observed to be any different in size.

The only native dye observed in preparation was a blue vegetable dye (indigo) which is color fast in cold water, but quite soluble in hot. A brown dye is also used, but the vegetable from which it is obtained is not known. These dyes are used to color part of the threads before they are woven. The only pattern observed in the native weaving was a blue and white, or brown and white stripe.

There seem to be no tribal laws governing the type of dress which may be worn. There must indeed be some customs of dress which are followed, but the clothing observed was so varied both as to type and to the method of wearing it that they could not be discerned. It was evident that European clothing customs are beginning to invade the "bush."

RECREATION

By far the most popular form of recreation of the villager is dancing to the music of drums, native harps and elephant horns. These dances are referred to as "plays." No excuse is required for holding such an affair. The "play" usually begins at sundown, and unless the occasion is important, is ended by 11 or 12 o'clock. If dignitaries visit the village the "play" may last until morning. The guest, in such cases, is expected to tip (dash) the dancers for their performances.

The "plays" are engaged in by both men and women who dance separately in a large circle of chanting, shuffling participants. The dances observed were not particularly wild or primitive but consisted of a sort of shuffling, wriggling walk which became faster and faster as the tempo of the drums increased. The chanting which accompanies the dancing is a monotonous repetition of the same few words sung in a minor key.

The villagers greatly enjoy games and may wager on even the simplest contests. One form of gambling involves the use of cowrie shells which were tossed in a fashion similar to dice. The people enjoy cards and play poker and other card games, especially around the mining camps, with their own local variations.

TIME CLOCKS

M. MELVINA SVEC
State University Teachers College,
Oswego, New York

In the lower elementary grades, the interest in time belts is aroused by radio programs, athletic games and events that take place at times other than the home area. The understanding of this phenomena and its explanation is not difficult. However, a practical and functional culminating activity provides interest and checks on comprehension.

At the lower elementary grade level, children can draw the face of a clock with the numerals, but leaving the clock hands to be filled in later. There is no need for uniformity of size or shape of the clock face or for the numerals other than the position for noon be in the place generally accepted. If it does seem desirable to use a uniform pattern, disks of cardboard at least six inches in diameter are satisfactory.

Let us assume that the children are developing an understanding of time belts in the United States. To obtain a distribution of cities and time zones, the teacher places names of cities on cards, sorts them into four separate boxes according to the time zone for each city. Since the boxes are not labeled and the cards are placed face down, the children enjoy the element of chance in selecting a card from one of the boxes.

Upon drawing a card, the child needs to discover the time belt in which the city is located. There is now a reason for finding places on the map in relation to the home area.

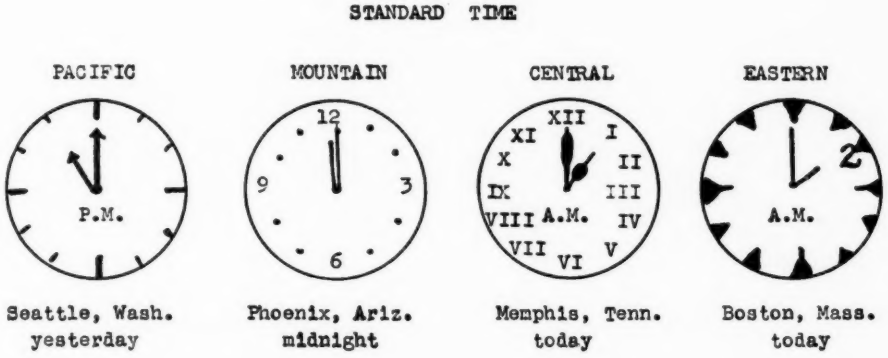
The next step is to complete the clock by drawing in the clock hands for the correct time belt. If the class members all start with the same clock time for the home area, e.g. 9 o'clock (school starts then), the computations for the same zones are comparable.

The clocks are completed with the addition of the name of the city, state, day and A.M. or P.M. Again, planning and arranging of this data should be meaningful and readable. An informal discussion of ways to place this data on the clock is helpful.

The clocks are now ready to be posted in their proper locations on a large map, or merely on the wall, properly oriented as to direction and position. Children then tell stories of what others might be doing at the various times and places. For example, "When I am

having lunch here at school, boys and girls out in Los Angeles away off to the west of me are going to school,'' is John's contribution.

Variations of this project are numerous. If the class is large enough for several committees, one member of a group assumes it is noon in the home area so others in the same group calculate their time accordingly. Other groups use still other starting hours. There are sure to be some complications of different days in parts of the nation, and morning and afternoon hours of the same day.



Still another variation is for each pupil to have a sheet with four small circles in a row. One card from each box supplies the names of four cities, one for each of the standard time belts. (See Figure).

In the sixth and seventh grades, classes would be more likely to use cities in other continents thus using longitudinal relationships.

This project gives the children a feeling of accomplishment and widened horizons. They become more aware of the meaning of and reasons for time differences.

USING MUSIC TO ENRICH GEOGRAPHY

MARGUERITE KEINARD
East Whiteland School

Along with the multitude of other audio-visual aids which so enrich the teaching of geography, music can be used as a real and effective tool in school geography classes.

A project well worth consideration for any school group is one that centers around collecting a number of records chosen from the

rich store of musical compositions which reflect the character of any region or country which school pupils may study. The selection of these records is, in itself, a fascinating aspect of the project, requiring much thought and study. For example, to decide which piece of music reflects the 1. activities or attitudes of the people, 2. aspects of the landscape or 3. even the characteristics of the climate, is a problem which should challenge music lovers in any classroom. A committee of pupils, alone or together with their teacher, may gather an excellent collection to be used by the class for various countries and aspects of geography.

Geographical music can be used as the basis for class discussions about how the environments and activities of peoples are reflected in their music. For example, is not the vast monotony and loneliness of the Russian steppes reflected in the sombre, melancholy quality of much of the music of this area? Are mountain peoples assisted in composing their lively folk tunes by the clear invigorating mountain air? Or perhaps their very isolation is reflected in some of their more wistful melodies. Is the easy rhythm of our Negro spirituals affected by the warm, humid conditions under which the Negro once slaved? Do the wild, frenzied dances of the Slavic peoples show their intense joy at completing a bountiful harvest which assures them a safe winter? Does the languorous music of Hawaii parallel the attitudes of a people whose environment is so kind to them that they can live an easy, carefree life?

Not only does the music itself show geographical influences, but so do the various *instruments* which may be identified when listening to records. The early English shepherd fashioned his pipe from a choice branch of a shrub which he passes in his wanderings; hence, today many English shepherds' dances are played in the same, thin, piping tones. The Mexican maraccas, made from dried gourds, perhaps show the inventiveness of a people who fashioned instruments from whatever crude objects were at hand. And of course the many types of African drums made from hides of the native animals are among the most primitive of instruments. Alert pupils will be quick to realize why it is natural that one of the earliest Chinese instruments, "the cheng," was made of a hollowed pumpkin containing from 12 to 20 bamboo reeds; or why an early Japanese instrument, "the oboe," was made of a conch shell with a metal mouthpiece added. Nor is it difficult to find geography behind the fact that the violin originated in Italy and that its

strings were made from the dried intestine of a sheep or goat.

Perhaps the most obvious way of finding geography in music is to notice the words which have been written to accompany much folk music—mountain songs, harvest songs, sailing songs, snow songs and even songs which describe a specific industry or resource. For a study of the United States, Carl Sandburg's *American Songbag* and John Lomax's *Our Singing Country* contain an excellent variety of such songs, including: *Red Iron Ore, De Ballet of de Bool Weevil, Greenland Whalefishing,* and many others whose titles do not indicate the wealth of geography within their verses.*

After the music has been discussed and the relationships understood, it may then be used as background music in the classroom when the pupils are working at some activity where intense concentration is not required, or where music may inspire some creative activity, such as writing playlets, stories or illustrating booklets. Most children enjoy working to the accompaniment of softly played music, and to many it means that the *mood or feeling* of a particular area is made quite real.

The music may be used as the basis or accompaniment for an assembly program, either as "geographic atmosphere" or for sheer enjoyment and appreciation. Well used, this tool may appeal to the intellect, the senses and even the emotions of students of geography, regardless of their age.

THE NEED FOR ORIENTATION UNITS IN HIGH SCHOOL GEOGRAPHY

PAUL POROCHNIAK
Classical and High School,
Salem, Massachusetts

The value of teaching geography on the secondary school level is gradually being recognized. Recent surveys show that there is an increase in the number and variety of courses in geography on the secondary school level. The sudden realization that events in remote parts of the world, once shrugged off as of no concern, now assume magnified proportions, and have done much to convince

* An annotated list of phonograph records for kindergarten thru senior high school is published by the Children's Reading Service, 106 Beekman St., New York 38, and contains many recordings of just this type, which will give a good start to any collection.

educators of the fact that the American adult is woefully unprepared to interpret probable causes and results of world events. There are signs of a "back to geography" movement in our secondary schools.

This course of events finds the secondary school teacher of geography somewhat confused as to how best to deal with the problem. Courses in geography usually presented on the high school level in the immediate past were courses in "commercial" or "economic" geography, very often telescoped into a one-semester limit to supplement the skill-ridden curriculum in the commercial or business departments of high schools.

Now the shift in emphasis is to a "world" geography type, expansion into at least a full-year course in the high school, and adapted not only to commercial departments but to college preparatory curricula as well. Recent surveys of students in colleges, universities, the institutions of highest learning, have revealed a pathetic knowledge of the world they are asked to serve and save. Progressive high schools are accepting the challenge of these surveys and introducing geography in the college preparatory curricula.

READINESS FOR WORLD GEOGRAPHY

Are high school pupils ready to receive the full benefits of a "world" geography course? The writer conducted exhaustive studies of pupil-knowledge of basic geographic concepts thru pretests in his geography classes at the Classical and High School, Salem, Massachusetts.[1] The studies showed clearly that pupils had inadequate backgrounds in the following types of geographic facts and concepts:

1. Reading and understanding maps and place locations
2. Knowledge of the behavior of the earth
3. Knowledge of natural phenomena

Pupil-weaknesses in the understanding of these three phases, essential to an understanding of "world geography" as presented on the high school level, prompted the writer to prepare a 136-page booklet entitled "Orientation Geography for Secondary Schools" for use by his pupils for a half-semester as a pre-requisite to the study of world geography.

That the necessity to plan, prepare and write an orientation

[1] Porochniak, Paul. "World Geography Orientation," Master's Thesis, Department of Geography, Clark University, Worcester, Massachusetts, 1952.

course of basic geographic concepts exists in a school system where geography is presented in each grade, 4 thru 8, is definitely established in the writer's experiment.

The problems and conclusions discussed below are largely, tho not entirely, excerpts from the writer's study and are pointed commentaries on his findings as a result of research into the problems. This research was conducted thru 1. many testings of pupil-knowledge, 2. studying responsible reports, writings and recommendations by leaders in geographic education, 3. personal correspondence with leaders in the field of geographic education and 4. questionnaires to all social studies teachers in the intermediate-grade schools of Salem.

ARE TEACHERS OF GEOGRAPHY ADEQUATELY PREPARED FOR THEIR TASKS?

While the writer understands that this problem exists in many communities, the conduct of a survey with this problem in mind in the school system of Salem would have been fruitless, for all teachers in the Salem School Department hold one or more degrees. These degrees are from one or more universities and/or teachers colleges, of quite excellent repute, which abound within a radius of 50 miles of Salem. Since the selection of teachers of geography was based upon their preparation in this and allied subjects, the problem of teacher-preparation did not exist in this community.

ARE SEQUENCE OF COURSES IN GEOGRAPHY ON INTERMEDIATE GRADE LEVEL EFFECTIVELY PRESENTED?

In attempting to find an answer to this problem, the writer received a severe jolt. When completed questionnaires from the local school system were studied, he found that while textbooks used in the five intermediate grade schools of the City were similar in scope, the difference in time devoted to the study of geography from school to school, and even within the same grade in the same school, differed sharply. So did the emphasis on phases of geography studied at each grade level. Nowhere in the system did the writer find a conscientious effort to emphasize the three basic geographic concepts he found lacking in pupil-knowledge in his high school pre-testings, altho several good books on map reading and understanding, and on the physical aspects of geography are available for junior high school grades.

In an attempt to compare Salem's syllabus with one recommended by the nation's teachers of geography, he found that none existed. While he found many teachers of geography writing recommendations in various periodicals and yearbooks—sound recommendations—only a precious few stressed coordination, and these were not interpreted into a coordinated, logical sequence of studies for the various grade levels by the nation's teachers of geography.

Have "Integrated Social Studies" Courses Affected Understanding of Basic Geographic Concepts?

For a decade or two, under the leadership of professors of Education, there was a great to-do about correlating history, civic education, geography—and every other conceivable "social studies" subject—into an "integrated" course. From contacts this writer has with teachers of social studies in New England, he understands that this trend is on the decline in this area, but is still strong in many parts of the country. In analyzing questionnaires of the local social studies teachers, he was impressed with statements by most that they prefer to teach geography or history or civics as such, and not in an "integrated" course. However, the word "integrated" seems to have a peculiar fascination for others, and often attracts the well-meaning teacher who wants his pupils to see the "inter-relationships" of all their studies.

This business of "inter-relationships" and "correlation" of everything in the school curriculum seems to be overdone and overemphasized to the extent that if a teacher cannot place the "Cardinal Objectives of Education" into every course he teaches, he feels he is not doing justice to the subject.

No doubt most of the college students who were tested in their knowledge of geography recently must have been products of "integrated social studies" courses. The writer has yet to examine a textbook on this subject and find geographic concepts on a par with history and civics; "Conservation of Our Resources" is undoubtedly the "geography" aspect of the course.

Are Current Textbooks in Geography Meeting the Needs of Our Pupils?

The writer makes no claims to being an expert in analyzing textbooks in geography, especially on the intermediate grade level, but during his 15 years as a teacher of secondary school geography,

he has examined and analyzed dozens of high school geography books on all phases included under "geography." He has already noted lack of understanding of basic geographic concepts in three areas on the part of his pupils as determined by numerous pre-tests.

In examining the intermediate grade texts used by geography teachers in Salem, he was struck by the similarity of emphasis on "journey" or "travel" in various parts of the world for geography in grades 4 thru 7. Only in grade 8 did this pattern deviate—and then to a study of "products" on a regional basis. These books are standard, highly publicized and in popular use thruout the country at these grade levels.

An exhaustive study of "world" geography textbooks on the market today shows clearly that they are either economic or human geographies with the label "world" to meet the current demand. The author, or authors, of these books are expert in one field or another, and the emphasis in their books clearly discloses which. The writer found but one rather obscure, now probably out-of-print book on the secondary school level that recognized the need for a review of basic geographic concepts and broader treatments of the several phases of geography necessary for a better understanding of the problems of the world today.

Since most high school curricula usually cannot permit more than one year to the study of geography, it becomes obvious that the need is for a textbook to include the physical, human, economic and political aspects of geography, if we are to recognize the fact that the formal schooling of most pupils ends with graduation from high school.

CONCLUSIONS

1. If children are to receive a well-rounded background in geography, a pattern or logical sequence of courses leading to the study of world geography at secondary school level must be established at the intermediate grade level.

2. A tendency exists to emphasize "journey" or "travel" geography to the detriment of a comparable emphasis of map studies and the natural phenomena in the pre-secondary school level.

3. Courses in "integrated social studies" seem to have had the effect of further detracting from the development of the basic

geographic concepts referred to earlier in the minds of pupils of intermediate grade schools.

4. Either a brief orientation course is necessary prior to the study of high school geography, or a revision of the curriculum in the intermediate and junior high school grades must be made, with more emphasis on the physical aspects mentioned. Most secondary school textbooks have not taken this need for orientation into consideration.

5. Many of the high school geography textbooks on the the market today have taken the label "world" geography without fulfilling the expectations suggested by the title. Most of these textbooks fail to meet the needs of a one-year course in geography, or to have taken into consideration the fact that this will probably be the last formal course in geography most of the pupils will ever have.

WORLD POLITICAL GEOGRAPHY IN THE CURRICULUM OF THE AIR FORCE RESERVE OFFICERS TRAINING CORPS

MAJORS DAVID C. WINSLOW AND DUANE C. TWAY
Air University

Possibly one of the greatest developments to foster geography in this country during the past two years has been its acceptance as a vital subject for the training of United States Air Force ROTC students.* Initiated as an offering of 12 class hours under the Army Specialized Training Program, it was expanded to 60 hours in the school year of 1951-1952 and will be expanded to 70 hours under the new curriculum to be instituted in 1953-1954. It is thought that the fundamental concepts of global geography and political geography are essenial to the training of the future reserve officer in the Air Force (See Figure).

In its earliest form, geography was offered as a 12-hour college unit under the A.S.T.P. offering of the various senior ROTC schools. In the planning stage, Drs. Isaiah Bowman, Richard Hart-

*This article has been reviewed by Drs. Jan O. M. Broek, Richard Hartshorne, Shannon McCune and Merle Prunty to whom the writers express their sincere gratitude.

shorne, Derwent Whittlesey, Charles C. Colby and Lt. Col. W. H. Kinard, Jr. of the United States Military Academy drafted the basic outline. In the writing, these people and J. K. Wright, Dorothy Good, Guy-Harold Smith, Phillip Dunaway, Mary Jane Keeny, Harold Sprout, Liam Dunne, S. W. Boggs, Sidman Poole and A. H. Robinson participated, assisted by government agencies preparing some of the materials.[1,2] The course included elementary, economic,

regional and political geography. In 1948 and 1950 up-to-date matter covering the same area was published.[3,4]

Recognition in 1950 that political geography on a world-wide basis was a "must" subject for the Air Force Officer led to the institution of this subject in Air Science I the following year. Proposed as an entire year's course of 60 hours in World Political

[1] Headquarters, Army Service Forces. *Geographical Foundations of National Power,* M 103-3, November, 1944, Acknowledgments.

[2] Headquarters, Army Service Forces. *Atlas of World Maps,* M-101, November, 1943.

[3] United States Army Field Forces. *Senior ROTC Manual,* Vol. II, June, 1948.

[4] United States Army Field Forces. *Senior ROTC Manual,* July, 1950.

Geography for Freshmen, the AF ROTC officials prepared the course. Aid was sought of two professional geographers, the Reverend Edmund A. Walsh and Dr. George T. Renner, who outlined the course and guided the project thru its initial stages.

The textbook, *World Political Geography,* by G. Etzel Pearcy and Russell H. Fifield was chosen because it was up-to-date, comprehensive and thought to be the most suitable for the course. Guidebooks were developed by Continental Air Command to aid the teacher in reaching the Air Force objectives.[5] Training aids were supplied in the forms of maps, projectors and transparencies, slides, 36 inch plastic globe and selected books in the field. Most of the teachers attended the Academic Instructors course of the Air Command and Staff School of Air University, where they were given some training in teaching the subject. Many others enrolled in courses in geography at the institutions to which they were assigned.

After establishment of Air Science I in a few institutions during the summer term of 1951, it was found that certain modifications should be made. During the following school year many schools offering AF ROTC made suggestions, for instance; Syracuse University, Princeton University, University of Maryland, Oklahoma A & M College, and Southern Methodist University. Syracuse University suggested that, "a more suitable and flexible outline for the course should be devised."[6]

A new course outline was developed to provide for these recommended changes. The revised subject outline is as follows:[7]

AIR SCIENCE I, 1ST SEMESTER

Subject	No. of Hours
The Nature and Scope of Political Geography	2
The History and Development of Political Geography	1
Political Geography of the United States	2
Political Geography of the U.S.S.R.	3
Political Geography of the British Empire	3
Political Geography of France	2
Political Geography of the German Reich	2

[5] Continental Air Command. *AF ROTC Instructors Guidebooks for Air Science I,* Mitchel Air Force Base, New York, N.Y.

[6] P. E. James. "Outline for the Instruction of World Political Geography," *Mimeographed,* 1951.

[7] D. C. Winslow. "Classroom Presentation of World Political Geography," *Lecture,* Academic Instructors Course, Air Command and Staff School, Maxwell Air Force Base, Alabama.

Review of Examinations and Critique over First Phase	1
Low Countries	2
Switzerland: a Successful Neutral	1
Italy in the Mediterranean	2
Spain and Portugal: Powers of the Past	2
The Five Fenno Scandic Countries	2
Poland: a Perpetual Problem	1
The Lesser Countries of Central Europe	1
Political Geography of the Balkans	2
Review of Examinations and Critique over Second Phase	1
Asia: Turkey and the Straits	2
"The Arab World"	2
Iran and Afghanistan	1
"The Complexity of India and Burma"	2
"Political Geography of China"	2
"Korea, Indo-China and Siam: Historic Asiatic Buffers"	2
"The Japanese Isles"	2
Review of Exams and a Critique over Third Phase	1
Political Geography of Africa	2
"The Malay Archipelago and Oceania"	1
"The Caribbean: An American Mediterranean"	2
Political Geography of Selected Latin American Countries	2
"Political Geography of the Oceans"	2
Review of Exams and a Critique over Fourth Phase	1
"Boundaries in International Relations"	1
"Population Factors in International Relations"	1
"Grand Strategy of World War II"	2
"Geography in Future World Politics"	1
Review of Exams and a Critique over Fifth Phase	1
Total	60

The changes were made with the following three aims in mind:

1. To more closely follow the arrangement of the textbook in order that classwork might be facilitated and study be aided.

2. To develop units of study that grow progressively more difficult as the student's capacities in various phases of the subject increase and

3. To allow inclusion of Latin American matter which had been previously omitted.

Offered in the 187 AF ROTC college and university units then in existence, the world political geography course was taught in the 1951-52 school year by approximately 584 assistant professors of Air Science and Tactics. It was given to about 65,000 freshmen.[8] In most cases the students were highly enthusiastic about the course, feeling that it met their needs for an understanding of a global

[8] Air University. *AF ROTC Generalized Course of Study,* Maxwell Air Force Base, Alabama, May 15, 1952, pp. 30-31.

world of the air age and for a clarification of the Air Force mission. Some thought, however, that it was difficult for freshmen, that the text was not pertinent, and recommended that it be offered later in the curriculum.

Subsequently, it was decided to completely revise the entire AF ROTC curiculum for the four years in order to make the program of a general nature, rather than attempting to produce officers with certain specializations. In this revision, the world political geography block, now taught for 60 hours in the freshman year, is being replaced by 10 hours of "Fundamentals of Global Geography" and 15 hours of "International Tensions and Security Structure" in the freshman offering, and 45 hours of "Military Aspects of World Political Geography" in the senior year. This is an increase of 10 hours overall in the time allocation to geography; however, the subject matter has been broadened to include the related fields of political science, history, sociology, economics and psychology. Presentation as an elementary and advanced study should strengthen the students understanding of geographical concepts.

The division of these new courses in the geography Divisions are as follows:[9,10]

FRESHMAN YEAR

DIVISION I. *FUNDAMENTALS OF GLOBAL GEOGRAPHY* — Total 10 Class Hours

Unit 1. Evolution of Geographical Knowledge	2	"
" 2. Map Projections	2	"
" 3. Geography of Weather	1	"
" 4. Major Geographic Regions of the Earth	1	"
" 5. Geographical Basis of Power	2	"
" 6. Military Aspects of Global Geography	2	"

DIVISION II. *INTERNATIONAL TENSIONS AND SECURITY STRUCTURES* — Total 15 Class Hours

Unit 1. Factors that Contribute to the Status of a Nation as a World Power	3	"
" 2. Forces that Develop Tensions Between World Powers	3	"
" 3. Problems of International Security	3	"
" 4. The World Military Situation	2	"
" 5. International Security Structures	3	"
" 6. Role of the United States in World Leadership	1	"

[9] *Ibid.*, pp. 78-79, 81-82.

[10] Continental Air Command. *AF ROTC Instructors Guidebooks, Air Science I, (Revised)*, May, 1952, p. IV, prepared under the direction of Major D. C. Winslow.

SENIOR YEAR

DIVISION I. *MILITARY ASPECTS OF WORLD POLITICAL GEOGRAPHY*

		Total Class Hours
Unit 1.	The Framework of International Politics	4 "
" 2.	The Anatomy of Political Power	2 "
" 3.	Geographical Basis of Power	9 "
" 4.	World Military Political Factors of Geography	4 "
" 5.	World Powers and Strategic Areas	12 "
" 6.	Changing Patterns of Power in World Politics	4 "
" 7.	World Security Problems in Relation to International Power Clashes	10 "

Inasmuch as the new curriculum will not be instituted until 1953-1954, it was necessary to prepare a revised *Guidebook* for use in the freshman course during the school year of 1952-1953.[11] It follows the pattern of the revised subject outline as shown previously except that the "Low Countries" unit is changed in title to "The Benelux Countries Between the Great Powers." Also, specific page references are given for every subject and the objective and development portions have been considerably enlarged.

To arrive at a revised curriculum, "the Air University formed a Curriculum Planning Group in February, 1952, with the mission of preparing the new curriculum." The responsibility of preparation of textual materials passed to the Headquarters, AF ROTC at the Air University which was activated August 1, 1952. The proposed courses of study were prepared and submitted to three reviewing groups. Their task was to determine its acceptability from an academic and Air Force point of view. Following each review the recommendations made were considered and necessary changes incorporated. The reviewing groups were:

1. A committee from the Air University Board of Visitors. Included were Dr. Arthur Adams, President, American Council of Education; Dr. Blake Van Leer, President, Georgia Institute of Technology; and Father John Kavanaugh, President, University of Notre Dame.

2. Another committee composed of 21 university officials and 16 AF ROTC personnel. The university officials were selected from a list furnished by the American Council of Education from schools having AF ROTC units. Three geographers who participated were Dr. Jan. O. M. Broek, University of Minnesota, Dr. Shannon Mc-

[11] *AF ROTC Generalized Curriculum (Proposed),* AF ROTC Curriculum Planning Group, Air University, Maxwell Air Force Base, Alabama, April 3, 1952, p. 1.

Cune, Colgate University and Dr. Bernt Wills, University of North Dakota.

3. A review committee composed of two representatives from each major air command within the continental limits of the United States participated.

In the present preparation of the 40 textbooks for the entire generalized curriculum leading organizations and associations are being asked to recommend Consultants and to evaluate materials. The books are being written within Panels, such as the "World Political Geography and Related Subjects Panel."

In the first offering of world political geography the approach was one of studying the nation-states and their politico-geographic role in world affairs. Now in the new program it is proposed to approach the subject quite differently, as one of principles and factors. Specially aimed at Air Force interpretation and usage, the books prepared by the Air University to cover this subject will be less likely to conflict with courses in political geography offered at an institution. Geographers are requested to forward any suggestions they may have to the committee of the Association of American Geographers.

The changes noted in the geographic portion of the curriculum resulted from the desire to make the course as pertinent to the Air Force mission as possible and to promote in future officers an understanding of and necessity for our national and international defense structures. Thus, the United States Air Force, in its recent ROTC Curriculum Planning, has shown the strongest interest and deepest concern in the subject content and application of world political geography.

COMMENTS ON HUMAN GEOGRAPHY AND PHYSICAL GEOGRAPHY

JOHN WESLEY COULTER
University of Cincinnati

The author of, "The Position of Physical Geography among the Sciences at Northwestern University," in the JOURNAL OF GEOGRAPHY for November, 1952, asks for comments. Without being in any way personal, the writer of this article has the following statements to make.

In some quarters the word "geography" is still commonly used for two disciplines as different from each other as day is from night. Human geography, a science of human collectivities in their spatial framework, is a study of the relation of man to habitat. The human geographer concerns himself with how the people of such and such an area have come to be as they are in view of the nature of the landscape.

Physical geography, like other natural sciences, comprises a complex group of fields of knowledge: meteorology, climatology, oceanography, geomorphology. The physical geographer asks himself the question, How have certain natural phenomena come to be as they are? Geomorphology, the last field demarcated by the geologic sciences, remains closely attached to geology. Its goal is a reasoned explanatory description of the physical features of the earth. It has many inter-relations with the sister sciences of physics, chemistry and biology, the data of which must be used in the study of the crust of the earth. The geomorphologist, devoted and dedicated to the description and analysis of land forms, is in methods of work a geologist. He tries to answer the question, How has the surface of the earth come to be as it is? Since the greater part of our land forms are inherited from the past, the geomorphologist must go back into geologic history to help solve his problems. On the other hand the human geographer has often to go back into human history to solve his.

If physical geography is taught in the same department with human geography, each should be taught by a scholar in his field. It is no longer possible for the average professor to be a tolerable scholar in these two disciplines with methods so different as those of human geography and physical geography. The pains to penetrate with maximum competence the laws of physical phenomena and the principles of human behavior—each of which requires a special training and approach—are beyond the capabilities of most people.

Since we conceive at the outset, by virtue of multiple reasons and very general conditions, that the activities of men are affected and in some cases hemmed in by their physical surroundings, physical geography as one basis of human geography is a necessary preliminary study. We should not, however, accept its procedures and methods as practical plans of investigation for research in human geography. Many human geographers are poorly trained

in physical geography. Sometimes they attempt to use the data and the methods of physical geography without understanding them and, in consequence, use them so badly as to incur the criticisms of specialists in that field. There is for human geography, as for physical geography, a technique of investigation which must be guided by the problems presented by the nature of the subject. Since one field is in the natural sciences and the other in the social sciences, their methods of research have little, if anything in common. Only if human geographers know at the outset exactly what their objectives are, and what are the proper methods of attaining them, will professionals in that field become more scholarly and truly aid one another.

We cannot maintain high standards of scholarship if we permit courses to be taught in our departments by people who have had, as Mr. Powers states, "little or no training" in subject matter. Such a course, by ordinary standards, could not be considered "successful," when it is taught or any part of it is taught by people with no training. Physical geography, wherever it is taught in a university, must justify itself as a natural science, should be taught by natural scientists and should be treated according to its own data and methodology.

The author of the article referred to again states, "altho the subject matter of physical geography is well adapted to studies in the field, we have not made field work a requirement for all students. . . ." Much of physical geography cannot be taught successfully without studies in the field. The great laboratory of physical geography lies at the door of the classroom. The armchair student of physical geography will not contribute any more to his science than will the armchair human geographer to his specialty. Physical geography, a natural science, and human geography, a social science, do have at least one attribute in common. The researcher in each of them goes out into the field to collect his data.

While we do not classify human geography with the natural sciences, we must apply the methods of the natural sciences, in so far as we can, to regional studies in human geography. A science is a systematic ensemble, coherent and plausible, of verifiable knowledge. It is a collection of data organized towards the solution of a problem. It is a field in which the researcher looks for the reality of things by means of all the processes of which the mind is capable.

The best means of investigation for the human geographer is direct observation—a direct view of things. Good field work implies accurate observation and description, comparison leading to objectivity and better understanding, explanation of facts noted—in some cases in the light of history, constant and untiring investigation of all causes and all effects. These exercises of logical and dynamic intelligence will lead to a true and reasoned judgment. Good observation is the result of long experience; it includes the ability to choose significant phenomena from the mass of facts which present themselves.

Again, according to Mr. Powers, the student of human geography in a course in physical geography, "is generally non-technical in point of view, and must not be led too rapidly thru the maze of new terms, concepts and principles in this course." The writer disagrees heartily with that point of view. A student who is going to take human geography as his major subject in undergraduate work should take courses in the natural sciences so that he may learn about the natural environment and, as implied above, study the method of science. He should master the terms, concepts and principles of natural sciences. Human geography demands as much knowledge of the natural environment as of humanity.

THIRD PAN AMERICAN CONSULTATION ON GEOGRAPHY*

HENRY J. WARMAN
Clark University

The third Pan American Consultation on Geography held in Washington, D.C., from July 25 to August 4, 1952, adopted several resolutions of major importance to Geography teachers of the Western Hemisphere in particular and of the World in general.

The Resolutions Committee was comprised of the following: Dr. Clarence F. Jones, Chairman (U.S.A.); Professor Humberto Fuenzalida Villegas (Chile); Professor Hilgard O'Reilly Sternberg (Brazil); Dr. Otto E. Guthe (U.S.A.); Lt. Col. Marco A. Bustamante (Ecuador); Professor Alfonso Freile (Chile); Prof.

* As reported by Henry J. Warman, United States of America delegate, Committee on Teaching and Methodology.

Speridiao Faissol (Brazil); Professor Horacio Ureta Martinez (Uruguay).

There were five subcommittees, one of which was the Committee on Teaching and Methodology. Its members were: Professor Horacio Ureta Martinez, Chairman (Uruguay); Professor J. Norman Carls, Secretary (United States of America); Professor Carlos Delgado de Carvalho, ex-officio (Brazil); Professor Henry J. Warman (United States of America); Dr. Lucy Abreu da Rocha Freire (Brazil); Dr. Benoit Brouillette (UNESCO), Adviser.

This subcommittee, in complying with the instructions and expressed desires of the Commission Chairman and its members to consolidate the resolutions of the First and Second Consultations, to discard resolutions which were impractical and unworkable, and to formulate new resolutions of lasting value and capable of immediate undertaking, grouped the previous resolutions into these six categories for purposes of discussion:

a. Concepts and standards
b. Courses, their content, placement, materials
c. Assembly and dissemination
d. Governments of official organizations
e. Geographic terminology
f. Exchange of professional personnel

The Resolutions Subcommittee on Teaching and Methodology worked carefully thru the 121 resolutions of the previous Consultations and recommended 20 resolutions which were placed under the correct categories mentioned above. These were then sent to the Main Resolutions Committee for Consultation approval and action.

REORGANIZATION

At the same time that all the subcommittees were working, there was a reorganization of the Commission's Departments, Committees and Working Groups into the more efficient arrangement given below. All resolutions were referred consequently to the proper Department, Committee or Working Group.

Departments	*Committees*	*Working Groups*
I. Physical Geography and Biogeography	Basic Natural Resources	Climatology
II. Human Geography	Colonization and Settlement	Population Problems
III. Regional Geography	Land Classification and Use Surveys	Urban Geography

IV. Teaching and Dissemination	A. Teaching of Geography B. Geography of the Americas	Exchange of people and publications

RESOLUTIONS APPROVED

The main Resolutions Committee re-worked the subcommittee's 20 suggestions and then submitted those which are listed below. At the final plenary session, August 4, 1952, a total of 53 resolutions were approved. Those pertaining to the Department of Teaching and Dissemination were:

A. Committee on Teaching

34. That a survey on the teaching of geography, including methods, content and teacher training at all school levels in each American state, be prepared, utilizing so far as possible the materials presented at the UNESCO seminar in Montreal in 1950, and that the results be published for study before the Fourth Consultation.

35. That the Committee draw up a complete list of universities in the Americas offering courses in geography, as well as of agencies responsible for geographic work, undertaking a methodical study of their policies and research programs.

36. That the Committee survey all publications on the subject of professional and business opportunities in the field of geography and that it promote the dissemination of this information among geographers in countries of the Americas.

37. That there be recommended to the proper authorities in the American states specific inclusion in primary and secondary geography courses of principles relating to soil erosion, wastage of water and devastation of the vegetable cover and other resources; while the necessary modification of the courses is being effected, it is recommended that the subject be treated under appropriate headings of the geography programs now in effect.

38. That a working group be established on exchange of persons and publications.

B. Committee on Geography of the Americas

39. That the Geography of the Americas be prepared for an educated lay public and for professional geographers for whom it will offer the most complete and current information possible concerning all aspects of the geography of the Americas.

40. That, with respect to the scope of its various parts, this work will incorporate, in so far as possible, the breadth of geographic treatment conceived at the Pan American Consultations on Geography.

41. That minimum standards in the preparation of this work include objectivity of approach, regional treatment, emphasis on the distinctive character of the American geographic scene, technical definitions which will be specified by the Committee on the Geography of the Americas and publication in any of the official languages of the PAIGH.

42. That the Committee on the Geography of the Americas will prepare the plan for the work; that each National Representative on the Commission on Geography, in agreement with the Committee, make necessary arrangements for the assignment of work to qualified collaborators; that, in case a National Representative is unable to act effectively in this regard, the Committee thru the Commission on Geography take whatever steps are deemed appropriate; and that, for each dependent area within the Americas, the Committee shall designate a qualified person to undertake this task.

43. That any Member State may request the Commission on Geography of the PAIGH to assign qualified persons to collaborate in the preparation of the contribution relating to its territory.

44. That the Committee on the Geography of the Americas coordinate editorial activities for this work.

45. That funds for the preparation and publication of the Geography of the Americas be obtained from the PAIGH, from the governments of the Member States, from institutions interested in this publication, and from the sale of this work.

Related Resolutions in Other Departments

Other resolutions of special interest to teachers of geography—(Senor Delgado de Carvalho stated that the *teachers of geography* are interested in *all* the resolutions)—were these:

In the Department of Physical Geography and Biogeography—

15. That the Commission on Geography give all possible assistance in the development of Project 29 of the Program of Technical Cooperation of the Organization of American States, entitled "Training Center for the Evaluation of Natural Resources," to be carried out by the Pan American Institute of Geography and History.

16. That, whenever possible, the Commission encourage and carry out training programs to provide the personnel needed for the study of natural resources. These programs should include training in the basic scientific fields, improvement of training facilities, continued and expanded exchange of specialists for consultative purposes, and in-service training in approximate agencies of the governments of the Member States including Canada.

18. That the Committee on Basic Natural Resources consider basic natural resources in the widest sense in the light of recent techniques; and that it use, in its surveys, quantitative geographical methods, including accurate representation on maps, so as to make possible a satisfactory evaluation of these resources.

In the Department of Human Geography—

20. That a working group on Population Problems be established, to act in close liaison with the Committee on Colonization and Settlement, to deal with aspects of population not directly relevant to Colonization.

23. b. That it continue its bibliographic work and that it promote the publication of an annual bibliographic supplement.

c. That maps be prepared to show areas colonized and settled in recent years, and that an atlas of small scale maps be prepared to show the history and the actual conditions of colonization and settlement in the Americas.

In the Department of Regional Geography—

27. Detailed land classification and use surveys on scales sufficiently large to permit mapping the specific impress of human occupance are recommended for the specific planning for resource development. Such surveys should include maps of physical land types (slope, soil and drainage), of climate, vegetation, population settlement and present land use on comparable scales.

29. The Committee on Land Classification and Use Surveys is interested in the program of the training center for resource study and desires that the training in field surveys be coordinated with the program of studies developed by the Committee.

From the rather brief insight obtained here of geographer's problems and desires in the Western Hemisphere one can take great courage, for once the language barrier was overcome thru simultaneous translation and interpretation as occurred at the Washington Consultation, the geographers assembled went to their tasks with confident belief and renewed vigor in their chosen field of geography.

WHO SAYS THAT GEOGRAPHY ISN'T PRACTICAL?

OLIVER H. LAINE
State Teachers College
Towson, Maryland

Geographers in the past have often found it necessary to be apologetic when explaining the usefulness of their discipline to their colleagues in the education and business worlds. Even today, in spite of the remarkable contributions made by geographers in the interest of national security, geography is forced to "take a back seat" in most public school systems, primarily because of a lack of understanding of the discipline in general, and because of the consistent neglect of it by Social Science teachers who find it much easier to deal with the more commonly accepted historical aspects than to "go out on a limb" into the broader more basic facts and understandings which underlie all human activities.

In most geography courses in the teacher's colleges one finds the emphasis being placed upon world-wide descriptions and explanations for past and present patterns of human distribution and their activities. It is the sort of "ivory tower" viewpoint which might be all right when one is merely interested in broadening the student's background, but which doesn't really make a better citizen of him because it doesn't let him understand more fully his immediate locale and the part that it plays in the worldwide picture.

It is true that our world is becoming smaller and smaller in the face of technological advances and the social changes go far beyond the narrow limits of the family circle to penetrate world horizons. But the trend is for extended governmental control to replace the economy of abundance and for educational practices striving to equip the individual for life in this evolving society. The impact on the individual requires that he must concern himself with knowledge and practices of voting, taxation, legislative control, active participation in government, *community planning*[1] and *community service.*

If the purpose of our schools is to strengthen, improve and unify American life, then we must begin by strengthening it at the com-

[1] "The place to start teaching people about planning is in the kindergarten," states the American Society of Planning Officials and it publishes a book of text and pictures describing this teaching process. It is a non-profit venture, so it is available at $1.00 per copy (purchases of 10 or more copies reduced by 10 per cent, 100 or more reduced by 20 per cent). Address: American Society of Planning Officials, 1313 E. 60 St., Chicago 37, Illinois.

munity level; both school and community must have a common purpose.

THE TOWSON EXPERIENCE*

At the State Teachers College, Towson, Maryland, the faculty has accepted the challenge, and the geography section (Social Science) has taken the lead. Recognizing the significance of the present rate of urbanization in the United States and its implications for education, the faculty approved the inclusion of a new course, Urban Geography, to be offered in the Fall of 1951. I believe that this marks the first time that such a course has been offered in the history of the Maryland State Teachers Colleges. Furthermore, the results definitely vindicate the inauguration of this forward-looking move and similar programs might well be adopted in all progressive schools. The course description, as printed in the Towson State Teachers College Catalogue, reads as follows: "A geographical analyis of urban settlements and the problems presented by them. Provision is made for a field study of a typical urban community area such as Towson."

My first step was to contact the Baltimore County Planning Commission to find out whether or not they would be interested in this school-community type of activity. Overwhelming, to say the least, was the reception received. Ever since its organization in 1948, the Baltimore County Planning Commission has been literally swamped with the work of trying to keep the current building program in some semblance of order, which left little time, in spite of an awareness of their predicament, for effective long range plans. They hadn't even been able to learn, except rather sketchily, what existed in the county in the way of land uses. So from that moment on, it was but a very short time before preliminary plans for a land-use inventory map of the 36 square miles included in the Towson Community Area with a total population of about 40,000, including an outlier, Cockeysville, immediately to the north.

Nine students volunteered to initiate this precedent-establishing course at Towson State Teachers College. What followed was one of the most exciting, interesting and gratifying activities that I have experienced in all of my many years connected with educa-

* EDITOR'S NOTE: Did you read Professor Alfred H. Meyer's article in the April, 1952 issue of the JOURNAL OF GEOGRAPHY entitled "College Geography and Community Planning"?

tional institutions. As one of the students so aptly expressed himself, "I've lived here all of my life, yet I never really understood all of the problems that the community faced. I shall never make snap judgments about community policies and operations again." It has opened a new road toward better school-community relationships.

Considerable time under the close supervision of the Baltimore County Planning Commission was spent in the preparation for the actual field work. The Planning Commission provided all of the necessary base maps: a 1″ to 500′ base map was used for most of the area, while a 1″ to 200′ base map was used for the center of Towson. Mr. Malcolm Dill, Director, and Mr. Franz Vidor, Senior Planner, discussed the basic principles of land use with these students and emphasized the usefulness of such a survey for any planning study.

After much class time was spent in orientation to planning, each of the nine students was assigned one section of the community area, which in turn was broken down into eight to 12 subsections. A sample survey of central Towson was made by the Urban Geography class so that each student would be familiar with the problems most likely to be encountered during the actual survey. The legend, drawn up to conform with accepted procedures in planning surveys, was mastered by the students so that they in turn could properly brief other students who would be assisting in the field work.

Several sections of my freshman class in "Principles of Geography," consisting of about 120 students, were drawn upon to help with the field work. This larger group was briefed on the purpose of the survey and all land use categories which were to be included. The group was then divided into nine sections to work under the supervision of the nine Urban Geography students, acting as section leaders. As such, they patrolled their respective areas during the survey and tried to clear up any misinterpretations on the spot. This was found to be most valuable, in that a number of questions could thus be settled which arose as the result of the rather sketchy briefing of the large group due to the limited time available for such purpose prior to the survey.

The logistics of the survey was another factor that had to be worked out in considerable detail. Permission to be absent from one-half day of classes was granted, which meant that everything must be timed perfectly in order to cover the large area within the com-

paratively short time allotted. Both private cars and school buses were used to transport the students to and from their assigned areas. Detailed time schedules were worked out well in advance of the actual survey.

The results of the field work were consolidated on a new set of maps by the students. This part of the activity was rather tedious and time-consuming, especially time-consuming because various techniques must be worked and reworked for application of the various symbols and colors, representing different land use, public and quasi-public activities, commercial facilities and total number of dwelling units.

In addition to the land-use inventory map, the nine students in the Urban Geography class were assigned special reports on several phases of organization and operation of the community, such as water and sewage systems, gas, electric and telephone facilities, industrial development and historical development. One student chose to make an inquiry into the rather delicate problem involving the Negro community in Towson. All reports were to be made with respect to future prospects of each aspect of community development and with specific recommendations where recommendations were in order. As it turned out, only two of the students found anything specific to recommend, but nevertheless the entire groups' understanding and appreciation of many aspects of the Towson Community Area were definitely increased. The Planning Commission found several of the individual reports worthy of duplication for their own files.

The maps now adorn the walls of the Baltimore County Planning Commission, and they are constantly being referred to by planning personnel in their daily work of promoting a better community. In addition, another county agency, the Recreation Department, has seen fit to borrow the complete set of maps upon which to base a survey of existing and proposed recreation areas. In the words of one of the planners, "We are finding your maps of greater and greater value as time goes on. We should have had these several years ago." "Best of all," according to Mr. Dill, Director, "the survey has provided Baltimore County with valuable and complete data as to existing land use at negligible cost to the county in time and money."

CONCLUSIONS

In retrospect, a few conclusions may be drawn which may, in

turn, help others embarking on some similar project:

1. Adequate preparation is of prime importance in the undertaking of such a survey, especially from the standpoint of the large number of students involved. Its success or failure depends on the amount of time spent in working out minute details in advance, administratively as well as technically.

2. Complete and well-made base maps are also essential. Results will always be poor if the students spend most of their time finding their assigned areas.

3. Accuracy of the students in inventorying the land uses is mandatory. This can only be accomplished if they have been thoroly briefed on all types of land uses and facilities, plus the practice of doing a sample area which will enable them to iron out practical problems.

4. Transferral of field data onto base maps for final presentation is another problem one must cope with. Uniform application of numbers, colors and symbols can be achieved if a minimum number of persons are engaged in that process.

5. Discrepancies, which are bound to crop up in spite of the best briefing, often must be re-checked in the field. However, aerial photographs, which are usually standard items with most planning commissions, can be a valuable aid.

6. Logistics is a problem which must be faced in every event, and one which increases with each increase in the size of the surveying body. "Dry runs" over the whole area can be a valuable aid in the smooth functioning of the inventory operation.

7. Last, but by no means least, you must solicit and get the cooperation of both the school administration and the local planning body, otherwise your study will lose its effectiveness from lack of application after the survey has been completed.

It is believed that the land-use survey described above is unique in that the field work connected with it and involving an area of approximately 36 square miles was completed in the short span of three hours. In the words of Mr. Dill, Director of the Baltimore County Planning Commission, "The survey was a practical demonstration of cooperation between a college, its students, and the planning commission with respect to mutual participation in planning of the community." And, as Dr. Earle T. Hawkins, President, Towson State Teachers College, stated, "It is indeed fortunate when college students undertake something which not only adds to their

own understanding of community problems, but contributes to the community in which they are studying."

I repeat, who says that geography isn't practical?[2]

THE NATIONAL COUNCIL AT WORK

According to the constitution there are in the National Council of Geography Teachers, several classes of membership, namely, annual members; contributing members; honorary members; and Fellows. Annual members pay a yearly fee of four dollars. A person becomes a contributing member by the payment of six dollars beyond their annual membership dues. Members attain the status of a Fellow after having been a member in good standing for five consecutive years. Under certain conditions the Executive Board may select persons as honorary members.

The names of the contributing members for the year 1951-1952 were printed on page 83 of the February, 1953 issue of the JOURNAL. On the same page appeared the names of persons who had attained the status of a Fellow during the months of January to October, 1952.

The number of Fellows in the National Council of Geography Teachers continues to grow rapidly.

National Council of Geography Teachers members elected to the status of Fellows in November, 1952 are: Coy T. Phillips, Paul L. Rawson, Jr., John W. Reith, James A. Rinier, Erhard Rostlund and George R. Rumney.

An additional 37 persons who became Fellows in December, 1952 are: Gerard L. Alexander, Harry H. Caldwell, Wesley Calef, Lucile Carlson, June S. Carroll, Myrtle Cash, Chester F. Cole, Robert E. Cramer, Samuel N. Dicken, Van H. English, Reuel B. Frost, Robert M. Glendinning, Mary Grant, Merrill S. Hartshorne, R. H. Hunnings, J. Rowland Illick, Louise Jessup, Reece A. Jones, Laura H. Kahler, Lowry B. Karnes, Wilfred D. Kelley, L. G. Kennamer, Jr., Margaret P. Lama, John Glenn Mosher, Jr., Sara Nancarrow, Lucy Valene Smith, Raymond W. Stanley, Gertha Sturgeon, Benjamin A. Tator, Mary E. Van Camp, Samuel Van Valkenburg, Harry D. West, Alice Wetterland, Agnes Whitmarsh, Julian Yoder, Malone Young and Elizabeth D. Zachari.

On March 31, 1953 the following persons attained the status of Fellows in the National Council: A. W. Watterson, Jewell A. Phelps, Headley E. Bailey, Saul Israel, J. Lewis Robinson, Effie Varnado, Andrew F. Fallon, Donna Lapinskas, Joseph A. Russell, Stanley E. Gaub, Paul A. Prince and Clara B. Sullenger.

INA CULLOM ROBERTSON, *Secretary*

[2] It is both interesting and gratifying to note that as a result of this school-community experiment the county in its advertisements in the American Society of Planning Officials, Vol. XVIII, No. 9, (Sept. 1952), lists a degree in geography as one of the acceptable qualifications for three (3) additional planning and zoning technicians.

GEOGRAPHICAL PUBLICATIONS

Leonard O. Packard, Bruce Overton, and Ben D. Wood. **Geography of the World.** Revised edition. Macmillan Company, New York, 1953. viii and 499 pages, 7 color plates, about 100 other maps and diagrams, over 300 illustrations, appendix, index.

Geography of the World is a high school textbook designed to give a sweeping overview of the whole world. It is divided into forty units grouped in ten sections: 1. Man and Mother Earth, 2. Regions and Resources of the United States, 3. Transportation, Communication and Trade the World Over. 4. The Other Americas. 5. A Continent in Turmoil, 6. Asia—Most Extensive Land Area of the Earth, 7. The Southwest Pacific—Rich Tropical Islands, 8. Lands Down Under, 9. Africa—The Last Frontier of the Nations, and 10. The Ends of the Earth. Almost one-third of the book is devoted to the study of the United States.

For each unit and section of unit, there are "Guides to Study," "Topics for Class Discussion" and "Work to Be Done," which should be exceedingly helpful to teachers. The textual material for each section on the United States is introduced by map exercises and questions. Thought-provoking questions are liberally interspersed among exercises for factual testing.

The many illustrations are well chosen and well reproduced, as are the maps, graphs and diagrams.

The value of the book may be somewhat minimized by some factual errors and by the tremendous scope with which it attempts to deal. For example, Kansas City is not the second livestock center in the United States; Omaha is the successful holder of that position and is crowding Chicago, especially as a cattle market. Other errors are to be noted similar to the following quotation: "Des Moines is in the midst of the country's richest agricultural region—a region which is one of the greatest wheat-growing areas of the world." The authors state that they consider the text "can only lay the foundation for the study of the world today and the world of tomorrow" and that teachers should initiate pupil research and utilize current news sources to supplement and vitalize the textual framework.

OLGA E. STEELE

University of Nebraska

Ivah Green. **Partners With Nature.** Laurel Publishers, Scranton 9, Pa., 1951. 112 pages. $1.25 (paper), $1.75 (cloth).

This book by the supervisor of rural education for Iowa is written in conversational style addressed to children in the middle and upper grades. It has worthy objectives, a good plan, many excellent illustrations and some helpful references. The author undertakes a difficult task, to cover concisely many subjects concerning which her knowledge is inadequate. The book contains hundreds of misleading or erroneous statements, making it unsuitable as a source of information. For example, "Animals cannot make food. People cannot make food." (p. 65) In attempting to explain terms and concepts, the author uses many inaccurate analogies or comparisons. The book fails to guide the pupils into active present participation in the "partnership with Nature." Almost ignored are problems of the school, school grounds, home or community. The training sought seems intended for use in the distant future. "Isn't it exciting for you to think of becoming a real conservationist? It should be! For although you won't have a chance . . . while you are still in school, you can be prepared to do exactly the right things when you are older." (p. 69) "Each of you boys and girls will be in a position someday to be a partner with Nature." (p. 91)

The information is largely presented dogmatically; considerable of it, dramatically; but much of it, inaccurately. The illustrations, many of which are excellent, are ignored in the text. Many of the better references now available are not included among the twenty given.

In brief, despite its merits and the need for a conservation text for these grades. this book is unsatisfactory.

HALENE HATCHER VISHER

Bloomington, Indiana

F. J. Monkhouse and H. R. Wilkinson. **Maps and Diagrams.** E. P. Dutton and Co., Inc., New York, 1952. 330 pages, 199 illustrations. **$6.00.**

This excellent textbook fulfills its purpose of presentation and analysis of cartographic "problems concerned with the methodology of the complication of data and with experiment in the technique of presentation." Excluded from consideration are the history of cartography, practical surveying and map projections. The first chapter is devoted to materials and techniques; the remaining five chapters deal with compilation and construction of maps and diagrams related to relief, climate, economic phenomena, population and settlements.

One is strongly impressed that this book was written specifically for geographers by geographers; problems and examples are drawn exclusively from the professional literature. As a matter of fact one of the book's most valuable features is the fine bibliographic notes of researches that owe their success largely to the symbolic abstraction of maps and diagrams.

Adoption of this textbook would perhaps best fit a course aimed at developing cartographically literate geographers rather than draftsmen or professional cartographers. Such a course would be more feasible with an advanced group of students for a number of reasons: 1. some transfer must be made from British to American practices and materials, 2. competence in elementary mathematics (mainly arithmetic) is necessary, 3. reading of certain of the bibliographic references would be essential, 4. lecture and class discussions could be supplemented by a major map compilation and construction project for each student.

Maps and Diagrams is probably the best illustrated of Dutton's "Advanced Geographies." It is also well written. One wishes the authors had more emphatically underscored the concept that map symbolism is the most important language of geography and its use should always aim at rendering more understandable the complex character of field knowledge. In the next edition the authors will likely correct their definition of Stewart's "population potential" (pp. 257-258), and revise the equation or interpretation of Christaller's "index of centrality" (p. 304).

CLARENCE L. VINGE

Michigan State College

Denoyer's School Atlas, H92, by L. Philip Denoyer, Denoyer-Geppert Company, Chicago 40, Ill. 1947. xxx pages with 10 page index and 32 maps. **$1.35.**

The preface relates the purpose of this atlas to be two-fold, "First, it is intended for use by individual pupils. . . . Second, it will be found very useful to teachers who have not had special courses in geography or in map reading." Like the H91, this book will be found valuable in the Social Studies in the Elementary and High Schools.

To assist the unitiated there is the "Reading the Map" with accompanying illustrations as given in H91. Also, the author has included the "Short Study of Each Map"

which gives a nontechnical description of the geographic relationships of each map along with a few pertinent questions. The index listing political features shown on the maps, with their latitude and longitude, will prove useful.

The maps of this volume include 19 physical-political of continents and countries; Population Density of World, United States, and Europe; Political Pacific Ocean, and of South Africa; Peoples of Europe; World Climates; World Occupations; World Transportation; and World Religions.

The discussion material is arranged in two columns in easily read print and on good quality paper. The maps are well constructed as to color, accuracy, and legibility and are on good quality stock. Also, the 9 x 11 inch format makes this atlas very useful to the teacher or pupil looking for a serviceable atlas.

Denoyer's Student Atlas, H93, by L. Philip Denoyer, Denoyer-Geppert Company, Chicago 40, Ill. 1949. xxx pages with 10 page index and 40 maps. **$1.75.**

The author states that the H93 is an outgrowth of the H92 in response to the request of a number of colleges for an atlas with more maps. However, this volume should prove valuable in high schools needing reference maps in the Social Studies.

The section on "Reading the Map" included in H91 and H92 is incorporated in this reference and will prove valuable to the person lacking background in map reading. Also, like the aforementioned atlas, this one includes the "Short Study of Each Map" which gives a simple discussion of the geographic relationships pertaining to each map as well as a few pertinent questions to be answered by the reader.

In addition to the maps found in H92 this volume contains United States Agriculture; United States Winter Rainfall; United States Summer Rainfall; United States Political and Time Belts; United States Oil and Natural Gas; United States Manufacturing and Minerals; World Earthquakes and Volcanoes; British Isles and Baltic Lands; World Annual Temperature and Ocean Currents; World Isotherms and Annual Variation; World Pressure and Winds; World January and July Isobars; World Annual Rainfall; World Soils. The map showing World Soils is accompanied by a description of "World Soils" by Louis A. Wolfanger.

Students and teachers alike will find several desirable features in this work. It is written in easily read print assembled in double columns. The maps are accurately drawn, well colored, not crowded with detail, and have good legends. The size, 9 x 11 inches, makes it easily handled on the desk.

CYRIL L. STOUT

Western Michigan College of Education
Kalamazoo, Michigan

The Columbia Lippincott Gazetteer of the World, edited by Leon E. Seltzer with the geographical research staff, Columbia University Press and with the cooperation of the American Geographical Society. 2148 pages. New York: Columbia University Press, by arrangement with J. B. Lippincott Company, 1952. **$50.**

The Columbia Lippincott Gazetteer of the World is the first really comprehensive gazetteer to be published since the Lippincott volume appeared nearly 50 years ago. Altho the purchase price of 50 dollars places the volume beyond the reach of most individual classroom teachers, it should be purchased for libraries and large reading rooms in every junior high school, high school, junior college, college, and county or city library in the United States.

At first thought, the cost seems high. However, if one stops to think of the enormous cost of collecting the information and then printing a large volume nearly 12 x 9 x 2.5 inches in size with five and one half million words; with facts and figures about 130,000 different places and 30,000 cross-reference entries, the cost appears reasonable. The project took nearly six years and cost over $400,000. Working in fifty-five languages, 150 scholars assisted Editor Leon S. Seltzer.

This reference book is a vast descriptive index of towns, cities, counties, countries, as well as physical features such as mountains, valleys and rivers. Regardless of where your blood relations are, either in or outside the Armed Services of the United States, you can locate the place in this volume.

A gazetteer is not published to take the place of an atlas—they are complementary to each other. Consequently, on the same reference shelf with your atlas should be this new volume, *The Columbia Lippincott Gazetteer of the World.*

THOMAS FRANK BARTON

Indiana University

Department of Geography, Northwestern University; **The Rural Land Classification Program of Puerto Rico**; Northwestern University Studies in Geography; No. 1, 1952. Lithoprinted by Edwards Bros., Ann Arbor, Michigan, $2.75.

One of the most heartening features in the growth of the geographic profession during the past decade has been the increasing recognition of the value of sound geographic methodology by both governmental and business leaders. *The Rural Land Classification Program of Puerto Rico* is one of the most significant contributions of the post-Second World War period both by and to the geographic profession, and warrants careful attention by all students of geography. This volume presents a detailed description of the methods employed in the 5-year project to inventory the land and its use thruout the entire island. The unit-area system of mapping, described in the 1930's by Finch and Hudson was used. No appreciable modification of the system was required, and it proved flexible enough to handle the highly diverse landscapes of this low latitude island.

The most unique feature of the survey was its use as a type of interneship program for United States pre-doctoral students in geography. Under competent direction, the survey was completed by a team of 19 such students from several universities, whose subsistence and transportation were paid by the Puerto Rican government. Most of the students were able to use their field experience as preparation for their doctoral dissertations. Summaries of five dissertation projects on local land use problems are presented in the volume and make it more than a guide to tropical land inventorying. The highly diverse areas represented in these type studies clearly indicates the need for more of the same in our geographic literature. The tropics are not as simple as many of our textbooks would seem to indicate.

JOSEPH E. VAN RIPER

Harpur College

BOOKS AND PAMPHLETS RECEIVED

Admiral Lord Mountevans. **Arctic Solitudes.** Philosophical Library, New York, 1953. xvi and 143 pages with bibliography, index and illustrations. $4.50.

Alaska Fishery and Fur-Seal Industries: 1949. Statistical Digest No. 26. United States Department of the Interior, Washington, D.C., 1952. iv and 68 pages with illustrations and charts. $0.25.

Rexford Newcomb. **Architecture in Old Kentucky.** University of Illinois Press, Urbana, 1953. ix and 185 pages with bibliography and index; also 70 plates. $12.50.

The State of Food and Agriculture: Review and Outlook, 1952. Food and Agriculture Organization of the United Nations, Columbia University Press, New York, 1952. iv and 126 pages. $1.00.

UN: Demographic Yearbook, 1952. Columbia University Press, New York, 1952. 518 pages. $7.50.

A. L. Kroeber and Clyde Kluckhohn. **Culture: A Critical Review of Concepts and Definitions.** Harvard University, Cambridge, Massachusetts, 1952. viii and 223 pages with references, appendices and index.

Paul A. Vestal. **Ethnobotany of the Ramah Navaho No. 4.** Harvard University, cambridge, Massachusetts, 1952. ix and 94 pages with references, appendices and index.

Henry Field. **The Anthropology of Iraq.** Harvard University, Cambridge, Massachusetts, 1952. ix and 174 pages with appendices, references, graphs, index and photographs, Figs. 1-76.

R. Russell and Cdr. D. H. Macmillan. **Waves and Tides.** Philosophical Library, New York, 1953. 348 pages with appendices and index-glossary. $6.00.

H. L. Hitchins and Cdr. W. E. May. **From Lodestone to Gyrocompass.** Philosophical Library, New York, 1953. 219 pages with 33 line diagrams, 19 plates and index. $4.75.

The Right to Education. UNESCO, Paris, 1952. 54 pages.

A General Economic Appraisal of Libya. United Nations, New York, 1952. 55 pages with appendices. $0.60.

Robert E. Dickinson. **Germany: A General and Regional Geography.** Dutton & Co., New York, 1953. xx and 700 pages with 32 illustrations and 124 maps and diagrams with bibliography and index. $10.00.

Mary Lusk Pierce, **The Community Where I Live.** Allyn and Bacon, Inc., New York, 1952. 140 pages with illustrations.

The Port of Toledo, Ohio, Lake Series No. 5. Corps of Engineers, U.S. Government Printing Office, Washington, 1952. viii and 95 pages with illustrations, maps and charts.

Thomson King. **Water.** Macmillan Company, New York, 1953. 238 pages with index. $3.50.

Analysis of Geography Textbooks Published for Use in the Elementary Grades. Prepared by The Association of North Dakota Geographers, 1952. 34 pages. $.25.

Science News 26 Penguin Books, Baltimore, 1953. 128 pages with illustrations. $.50.

A Television Policy for Education. American Council on Education, Carroll V. Newsom, Editor, Washington, D.C., 1952. 266 pages with bibliography and appendix. $3.50.

W. R. McAuliffe. **Modern Asia Explained.** Philosophical Library, New York, 1952. 163 pages with maps and index. $3.25.

Catalog of National Exhibits Seventeenth International Geographical Congress. The Library of Congress, Washington, D.C., 1952. 81 pages. $0.65.

Demitri B. Shimkin. **Minerals—A Key to Soviet Power.** Harvard University Press, Cambridge, 1953. 452 pages with index, illustrations, bibliography and appendix I and II. $8.00.

Maurice Herzog. **Annapurna.** E. P. Dutton, New York, 1953. 316 pages with illustrations. $5.00.

John Brown. **Two Against the Amazon.** E. P. Dutton, New York, 1953. 247 pages with bibliography. $3.50.

Blickmore and Cook. **Concise Oxford Atlas.** Oxford University Press, New York, 1953. 97 pages and clxviii. $5.00.

John L. Myres. **Geographical History in Greek Lands.** Oxford University Press, New York, 1953. ix and 381 pages with index and 12 plates. $7.00.